

REMARKS

In response to the above-identified Office Action, Applicant traverses the Examiner's rejection to the claims and seeks reconsideration thereof. Claims 1 and 3-14 are amended, claims 15-17 are added and no claims are cancelled. Accordingly, claims 1-17 are now pending in the present application.

The instant application is directed to a socket-head screw made merely by successive cold working operations using a steel having a carbon content lying in the range 0.15% to 0.25%, and wherein said screw has a socket head in which the socket has a depth greater than 0.6 times a diameter of the socket.

I. Claim Amendments

Applicant respectfully submits herewith amendments to claims 1 and 3-14. Claim 1 is amended to recite the further limitation of "wherein said screw has a socket head in which the socket has a depth greater than 0.6 times a diameter of the socket." Applicant respectfully submits the amendment to claim 1 was previously recited in claim 3 and therefore is not new matter. Claims 3-14 are amended to depend from claim 1. Claims 3-5 and 7 are further amended to delete the recited preferable range. Claim 3 is further amended, as will be discussed more fully below, to clarify that the diameter of the socket is being referred to. Thus, since the amendments are supported by the specification and do not add new matter Applicant respectfully requests entry and consideration of the amendments.

II. New Claims

Applicant respectfully submits new claims 15-17. Claim 15 recites a screw according to claim 1, having a manganese content that lies in the range 1.00% to 1.30%. The limitation of claim 15 was previously recited in claim 4. Claim 16 recites a screw according to claim 1, having a boron content that lies in the range 20ppm to 50ppm. The limitation of claim 16 was previously recited in claim 5. Claim 17 recites a screw according to claim 1, having a titanium content that lies in the range 0.02% to 0.05%. The limitation of claim 17 was previously recited

in claim 7. Thus, since claims 15-17 are supported by the specification and do not add new matter Applicant respectfully requests entry and consideration of the claims.

III. Claim Objections

In the outstanding Office Action, claims 4-14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. Applicant respectfully submits herewith amendments to claims 4-14 in which the claims are amended to depend from claim 1. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the objection to claims 4-14.

IV. Claims Rejected under 35 U.S.C. §112

In the outstanding Office Action, claim 3 is rejected under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully submits herewith an amendment to claim 3 in which the recitation of “preferably” is deleted. Applicant further replaces the term “it” with “said screw” in line 2 and deletes “its” from line 4 and clarifies that the depth of the screw has a socket head in which a depth of the socket is greater than 0.8 times “the diameter of the socket.” In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 3 over 35 U.S.C. §112, second paragraph.

V. Claims Rejected under 35 U.S.C. §103(a)

In the outstanding Office Action, claims 1-3 are rejected under 35 U.S.C. §103(a), as being unpatentable over U. S. Patent No. 2,213,813 issued to Hunt ("Hunt") in view of Patent Application GB 2323387 to Cassidy ("Cassidy"). Applicant respectfully traverses the rejections for at least the following reasons.

To establish a *prima facie* case of obviousness, the Examiner must show the cited references, combined, teach or suggest each of the elements of a claim. In regard to claim 1, Applicant respectfully submits neither Hunt nor Cassidy alone, or in combination, teach or

suggest at least the elements of “a socket-head screw made merely by successive cold working operations using a steel having a carbon content lying in the range of 0.15% to 0.25%” and “wherein said screw has a socket head in which the socket has a depth greater than 0.6 times a diameter of the socket” as recited in claim 1.

Hunt discloses a socket head screw made of metal. As acknowledge by the Examiner, Hunt is silent on the specific metal used for making the screw. Instead, the Examiner relies upon Cassidy to teach a steel having the recited carbon content range.

Cassidy describes a method of making a rockbolt. Although Cassidy teaches using a steel comprising 0.2 to 0.35% carbon, Cassidy does not teach or suggest a steel specifically comprising “a carbon content lying in the range 0.15% to 0.25%” as recited in claim 1 and further does not suggest that the percentage of carbon may be important in making sockets much less the use of low carbon steels in low temperature applications.

Apparently recognizing the failure of the references to provide a motivation for the combination relied upon by the Examiner, the Examiner states the “examiner knows from personal experience that low carbon steels are also preferred for low temperature applications.” See Office Action, page 4. Applicant respectfully submits the Examiner’s knowledge, however, is not a sufficient basis for combining references to render a claim obvious.

Moreover, upon review of the references one of ordinary skill in the art would not be motivated to combine the references for at least the reason that the references relate to different objectives and different structures. As previously discussed, Hunt teaches the formation of a socket head screw having a hollow head which eliminates excess metal while the mass of metal to be worked is considerably reduced. See Hunt, col. 1, lines 33-42. Hunt does not contemplate that the screw have any particular support strength or load bearing qualities, much less extraordinary load bearing qualities. Moreover, Hunt does not provide any teaching or recommendation for selecting a specific metal. Hunt further does not contemplate that a particular carbon content of the metal used for making the screw may be desirable, much less desirable for making a socket having a great depth. Cassidy teaches a rockbolt formed from particular materials such that it is strong enough for highly stressed rock reinforcement

applications, and in particular mining. See Cassidy, page 5. Upon viewing these teachings, one of ordinary skill in the art would not recognize any desire to incorporate materials for forming rockbolts as taught in Cassidy into the socket screw of Hunt. Instead, it appears it is only upon review of Applicant's specification that the desirability of a socket-head screw using a steel having a carbon content lying in the range of 0.15% to 0.25% is recognized. As the Examiner is no doubt aware, such hindsight reconstruction is inappropriate as a matter of law.

The Examiner has further not pointed to, and Applicant is unable to discern a portion of Hunt or Cassidy teaching or suggesting the element of "wherein said screw has a socket head in which the socket has a depth greater than 0.6 times a diameter of the socket." The Examiner alleges Figure 7 has a socket with a depth of 0.6 or 0.8 times its diameter. See Office Action, page 7. Applicant respectfully disagrees for at least the reason that Hunt does not indicate that the figures are drawn to scale therefore a particular depth may not be discerned from the figure. Moreover, as illustrated in the comparative diagram of Figure 7 of Hunt and Applicant's invention attached as Exhibit A, even if the depth of the socket shown in Figure 7 is measured, the only ratio regarding the depth of the part of the socket having a constant diameter and the corresponding diameter of the socket that may be discerned is approximately 3/10, i.e. about 0.3. Thus, not only may the combination of Hunt and Cassidy not be relied upon to disclose the process for making the recited socket-head screw but the references combined fail to teach or suggest an identical or only slightly different product to that recited in claim 1.

For at least the foregoing reasons, the combination of Hunt and Cassidy may not be relied upon to teach or suggest each and every element of claim 1 or its dependent claims. Since each of the elements of claims 1-3 are not taught or suggested by the references, a *prima facie* case of obviousness may not be established. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-3 over 35 U.S.C. §103(a).

In regard to claims 4-17, Applicant respectfully submits these claims depend from claim 1 and incorporate the limitations thereof. Thus, for at least the reasons that claim 1 is not *prima facie* obvious over Hunt in view of Cassidy, claims 4-17 are further not obvious over the references.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-17 patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

PETITION FOR EXTENSION OF TIME

Per 37 C.F.R. 1.136(a) and in connection with the Office Action mailed on January 17, 2006, Applicant respectfully petitions the Commissioner for a three (3) month extension of time, extending the period for response to July 17, 2006. The Commissioner is hereby authorized to charge payment to Deposit Account No. 02-2666 in the amount of \$ 1,020.00 to cover the petition filing fee for a 37 C.F.R. 1.17(a)(2) large entity. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

Dated: July 13, 2006

By: _____

Eric S. Hyman, Reg. No. 30,139

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on July 13, 2006.

Jean Svoboda